

# CLAIMS

[Claim(s)]

[Claim 1] A manufacturing method of saponins cultivating an undifferentiated cell lump obtained by removing a cell lump which does a callus obtained after subculture by a culture medium for callus induction in an organization of a medicinal ginseng radix plant body, and redifferentiates subculture for it by a culture medium for redifferentiation derivation at the time of this subculture, and performing component extraction.

[Claim 2] A manufacturing method of an undifferentiated cell lump which does subculture of the callus derived from a medicinal ginseng radix plant body by a culture medium for callus induction, cultivates an elasticity-ized callus by a culture medium for redifferentiation derivation, and is characterized by removing a cell lump which redifferentiated.

[Claim 3] An undifferentiated cell lump which does not form an organ by a culture medium for redifferentiation derivation and which is derived from a medicinal ginseng radix plant body.

[Claim 4] A manufacturing method of the saponins according to claim 1, wherein auxin of a culture medium for callus induction and concentration of cytokinin are  $10^{-7}$ - $10^{-5}$ M, respectively and auxin concentration is more than concentration of cytokinin.

[Claim 5] A manufacturing method of the saponins according to claim 1 or 4 with which a subculture period of an derivation callus in a culture medium for callus induction is characterized by being 3-10 generations with four to six weeks of every passage cycles.

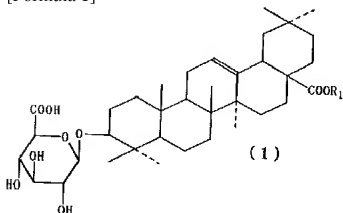
[Claim 6] A manufacturing method of the saponins according to claim 1, wherein concentration of auxin of a culture medium for redifferentiation derivation is  $10^{-7}$ - $10^{-6}$ M and concentration of cytokinin is 1 / 10 - 1/100 of concentration. [ of auxin ]

[Claim 7] A manufacturing method of the saponins according to claim 1 characterized for a microorganism or its extraction ingredients, such as bacteria which raise each substance on a carbon source and acetic acid mevalonate pathway, plant sterol biosynthetic inhibitor, and saponin production to a culture medium for redifferentiation derivation, by independent, combining and adding.

[Claim 8] A manufacturing method of the saponins according to claim 1 whose medicinal ginseng radix plant body is *Panax japonicus*.

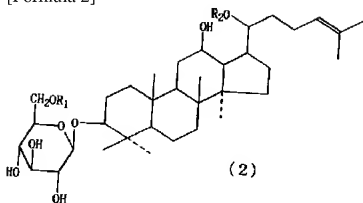
[Claim 9] Saponins of a following general formula (1) obtained by a manufacturing method of claim 8, (2), and (3).

[Formula 1]



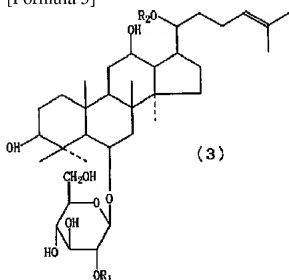
[ $R_1$  is H or 1-hexose among a formula. ]

[Formula 2]



[Among a formula, although  $R_1$  and  $R_2$  are H or 1-hexose, they are neither of 1-hexose. ]

[Formula 3]



[ $R_1$  and  $R_2$  are the same as the above among a formula. ]